

MN4GA/4GB-FP1 Series

How to fill out block manifold MN4G Series manifold specifications sheet

● Manifold model No. (example)

MN **4**GA1 **8** **0R-** **CX** - **T50** **W** **H** - **8** - **3** - **FP1**

A Model No. **B** Solenoid position **C** Port size **D** Electrical connections **E** Terminal/Connector pin **F** Option **G** Station No. **H** Voltage

When filling in this field, select the model No. from "Block configurations" (pages 163 to 168). (Reduced wiring connection) Array method (Note: Fill in for reduced wiring.)

Part name	Model No.	Layout position																														Quantity			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
Wiring block	N4G1R-T :50:	<input type="radio"/>																																	1
With solenoid valve Valve block (Page 163)	N4GA1 1 : 0R- C4	<input type="radio"/>	<input type="radio"/>																															2	
	N4GA1 2 : 0R- C6				<input type="radio"/>																													1	
	N4GA1 3 : 0R- C4			<input type="radio"/>																														1	
	N4GA1 <input type="checkbox"/> 0R- <input type="checkbox"/>																																		
	N4GA1 <input type="checkbox"/> 0R- <input type="checkbox"/>																																		
	N4GA1 <input type="checkbox"/> 0R- <input type="checkbox"/>																																		
	N3GA1 1 : 0R- C4									<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																							3
N3GA1 <input type="checkbox"/> 0R- <input type="checkbox"/>																																			
Valve block with masking plate (Page 163)	N4GA1R-MP																																		
	N4GA1R-MPS																																		
	N4GA1R-MPD					<input type="radio"/>																													
Supply and exhaust block (Page 165)	N4G1R-Q <input type="checkbox"/> - 8L							<input type="radio"/>					<input type="radio"/>																						
	N4G1R-Q <input type="checkbox"/> - <input type="checkbox"/>																																		
	N4G1R-Q <input type="checkbox"/> - <input type="checkbox"/>																																		
Partition block (Page 166)	N4G1R-S A								<input type="radio"/>																										
	N4G1R-S <input type="checkbox"/>																																		
	N4G1R-S <input type="checkbox"/>																																		
End block (Page 166)	N4G1R-E R																																		
	N4G1R-E <input type="checkbox"/>																																		
Mounting rail	Lz= <input type="text"/> (How to calculate length on next page)	Blanking plug						Silencer						Tag plate (included)		Included parts																			
		GWP 4-B		GWP 6-B		GWP 8-B		SLW-H6		SLW-H8		A <input type="radio"/>																							
		Cable with D sub-connector		4GR-CABLE-DO <input type="checkbox"/> - <input type="checkbox"/>		Push-in fitting tube remover (attached as standard)		Not required (check the box) <input checked="" type="checkbox"/>																											

* A circuit diagram of the above manifold model No. (example) is provided on the following page. Use for reference.

If the tube remover (standard accessory) is not required, place a check.

Preparing manifold specifications sheet

- Complete from the left end, with the piping port facing forward.
(Write the block model Nos. and positions you determined referring to the block configurations (pages 163 to 168).)
- Write the total number of blocks specified in the quantity field in the table far right.
- Mark a circle for attachments that are required.
- Indicate the mounting rail length. (Fill in only when a length other than the standard length is required.)
- As there are manifold specifications sheets for each of the various series, fill in the form for the corresponding specifications.
 - MN4GA1: Page 172
 - MN4GB1: Page 172
 - MN4GA2: Page 173
 - MN4GB2: Page 173
 - MN4GA×1, 2 (mix manifold): Page 174
 - MN4GB×1, 2 (mix manifold): Page 174

MN4GA/4GB-FP1 Series

Mounting rail length (L2)

- the rail length, Calculate using the calculation method shown below.
The obtained length is standard.
- With standard length, For specifications sheet, N(L2) is not required.
Indicate the length when using a non-standard length.

How to determine the length of the mounting rail

$$\text{Manifold length (L1)} = (A \times \text{Valve block Quantity}) + (B \times \text{Supply and exhaust block Quantity}) + (C \times \text{Partition Block Quantity}) + D + E$$

$$\text{Mounting rail length (L2)} = L2' \times 12.5$$

A, B, C, D, and E indicate the length (width) of each block.

$$L2': \frac{L1+40}{12.5} \rightarrow \text{round up to integer}$$

$$\text{Rail mounting pitch (L3)} = L2 - 12.5$$

Block length (width) dimensions table (mm)

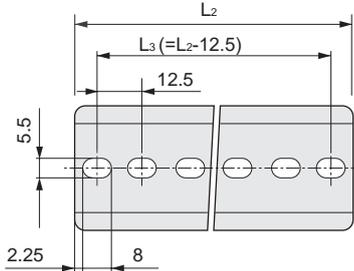
		MN4GA/B1	MN4GA/B2	MN4G1/2MIX		
				MN4GA/B1	MN4GA/B2	
A	Valve block	10.5	16	10.5	16	
B	Supply and exhaust block	16	18	16	18	
C	Partition block	10.5	10.5	10.5	10.5	
D	Individual wiring	41	46	44.5		
	For reduced wiring Wiring block	T10/T11	83.8	86.3	86.3	
		T10R/T11R	83.8	86.3	83.8	
		T30/T5*	69.3	71.8	71.8	
		T30R/T5*R	69.3	71.8	69.3	
		T6*	143.5	146	146	
		T7*	64.3	66.8	66.8	
T8*	64.3	66.8	66.8			
E	Mixed block			16		

* The end block is included in the wiring block.

DIN rail length quick reference table

L1: Manifold Length	47.5 or less	47.5 Over to 60 or less	60 to 72.5	72.5 to 85	85 to 97.5	97.5 to 110	110 to 122.5	122.5 to 135	135 to 147.5	147.5 to 160	160 to 172.5	172.5 to 185	185 to 197.5	197.5 to 210	210 to 222.5	222.5 to 235	235 to 247.5	247.5 to 260	260 to 272.5	272.5 to 285	285 to 297.5	297.5 to 310	310 to 322.5	322.5 to 335	335 to 347.5	347.5 to 360
L2: Rail Length	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5	400
Pitch L3	75	87.5	100	112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	387.5

*1: L1 exceeds this table, "How to calculate the length of the mounting rail" for calculation.



Electric actuator
Pneumatic cylinders
Assistive device
Pneumatic valves
FRL/Auxiliary Components Electronic Component
Vacuum components
Main line components
Fluid control valves
Main line components
Anti-bacterial/ bacteria-removing filter
Vacuum components
Fluid control valves

FP1

FP2

MN4GA/4GB-FP1 Series

How to fill out wiring specifications sheet

Not required for standard wiring and double wiring.

● Wiring specifications sheet (example)

* The following example has been filled out in accordance with the manifold specifications sheet on the previous page.

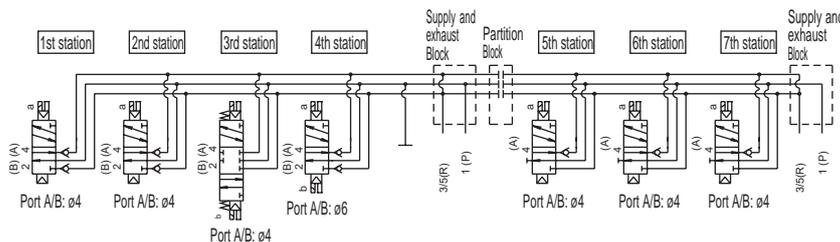
Connector pin No.				Valve No.																							
T50/T50R	T51/T51R	T52/T52R	T53/T53R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1	1	a																							
2	2	2	2	a																							
3	3	3	3				a																				
4	4	4	4				b																				
5	5	5	5					a																			
6	6	6	6					b																			
7	7	7	7				a																				
8	8	8	8				b																				
9	9	9	9																								
10	10	10	10																								
11	11		11					a																			
12	12		12						a																		
13	13		13							a																	
14	14		14																								
15	15		15																								
16	16		16																								
17	17		17																								
18	18		18																								
19	19	COM	19																								
20	20	COM	20																								
			21																								
			22																								
			23																								
			24																								
			25	COM																							
			26	COM																							

* Note that when the wiring method is T50/T50R, the COM polarity will be + (positive).

● Notes on wiring specifications

- Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. Consult with CKD, as products will be custom made in this case.
- The valve No. is determined by counting the valve blocks only in order from the left with the ports facing forward. Note that this differs from the installation position numbers.
- As the connector pin No. and valve No. differ for each reduced wiring method (T1*/T30/T5*/T6*/T7*/T8*), fill out the form upon reviewing the notes for each.
- Wiring (socket assembly) is included with valve blocks with masking plates. A side only for "-MPS". Both A and B sides for "-MPD".
- Double solenoids or 3-position solenoid valves cannot be assembled to "-MPS". Order valve block with solenoid valve and carry out expansion.
- It is not possible to install spare wires for station expansion in advance. Wire the socket assembly of the solenoid valve for expansion of stations. For the procedure for station expansion, refer to "Pneumatic Valves (CB-023SA)".

Reference circuit diagram Simplified circuit diagram of manifold model No. (example) from previous page



* The manifold station numbers are set in order from the left with the piping port facing forward. (Wiring blocks, supply and exhaust blocks, partition block, and end block are not included in the manifold station No.)

* Select the model No. from the block configurations (pages 163 to 168) and the page for each specification model No.

* With piping port facing front, arrangement positions are set in order from the left.

MN4GA/B1 / 2-FP1 Mix manifold specifications sheet

● Contact ● Quantity set(s) ● delivery date Date issued / /

Slip No. _____ Order No. _____

Company _____

Contact _____

Order No. _____

● Manifold model No.

MN G X12R- - - - - -FP1

A Model No. **C** Port size **D** Electrical connections (Reduced wiring connector) **E** Terminal/Connector pin Array method (Note: Fill in for reduced wiring.) **F** Option **G** Station No. **H** Voltage

When filling in this field, select the model No. from "Block configurations" (pages 163 to 168).

Part name (Page)	Model No.	Layout position																														Quantity					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
Wiring block	N4G <input type="text"/> R-T <input type="text"/>																																				
With solenoid valve Valve block (Page 163)	N4G <input type="text"/> 0R- <input type="text"/>																																				
	N4G <input type="text"/> 0R- <input type="text"/>																																				
	N4G <input type="text"/> 0R- <input type="text"/>																																				
	N4G <input type="text"/> 0R- <input type="text"/>																																				
	N4G <input type="text"/> 0R- <input type="text"/>																																				
	N3G <input type="text"/> 0R- <input type="text"/>																																				
	N3G <input type="text"/> 0R- <input type="text"/>																																				
	With masking plate Valve block (Page 163)	N4G <input type="text"/> R-MP <input type="text"/>																																			
N4G <input type="text"/> R-MPS <input type="text"/>																																					
N4G <input type="text"/> R-MPD <input type="text"/>																																					
Air supply spacer (Page 167)	4G1R-P- <input type="text"/>																																				
	4G2R-P- <input type="text"/>																																				
Exhaust spacer (Page 167)	4G1R-R- <input type="text"/>																																				
	4G2R-R- <input type="text"/>																																				
In-stop valve spacer (Page 168)	4G1R-1S																																				
	4G2R-1S																																				
Mixed block (Page 166)	N4G12R-MIX																																				
Supply and exhaust block (Page 165)	N4G <input type="text"/> R-Q - <input type="text"/>																																				
	N4G <input type="text"/> R-Q - <input type="text"/>																																				
	N4G <input type="text"/> R-Q - <input type="text"/>																																				
Partition block (Page 166)	N4G <input type="text"/> R-S <input type="text"/>																																				
	N4G <input type="text"/> R-S <input type="text"/>																																				
	N4G <input type="text"/> R-S <input type="text"/>																																				
End block (Page 166)	N4G <input type="text"/> R-E <input type="text"/>																																				
	N4G <input type="text"/> R-E <input type="text"/>																																				
Mounting rail	L ₂ = <input type="text"/> * Write an integer multiple of 12.5. (How to determine the length page 170)	Blanking plug															Silencer															included parts					
		GWP <input type="text"/> -B <input type="text"/>	GWP <input type="text"/> -B <input type="text"/>	GWP <input type="text"/> -B <input type="text"/>	GWP <input type="text"/> -B <input type="text"/>	SLW-H <input type="text"/>	SLW-H <input type="text"/>	Cable with D sub-connector 4GR-CABLE-D0 <input type="text"/> - <input type="text"/>															Push-in fitting tube remover (attached as standard) Not required (check the box) <input type="checkbox"/>														

Electric actuator
Pneumatic cylinders
Assistive device
Pneumatic valves
FRL/Auxiliary Components
Electronic Component
Vacuum components
Main line components
Fluid control valves
Main line components
Anti-bacterial/bacteria-removing filter
Vacuum components
Fluid control valves

Common terminal block (T10/T11) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
 * Not required with standard wiring/double wiring.

Connector pin No.		Valve No.																							
T10	T11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1																								
2	2																								
3	3																								
4	4																								
5	5																								
6	6																								
7	7																								
8	8																								
9	9																								
10	10																								
11	11																								
12	12																								
13	13																								
14	14																								
15	15																								
16	16																								
COM	17																								
COM	18																								
	19																								
	20																								
	21																								
	22																								
	23																								
	24																								
	COM																								
	COM																								

D-sub-connector (T30) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
 * Not required with standard wiring/double wiring.

Connector pin No.		Valve No.																							
T30		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1																									
	14																								
2																									
	15																								
3																									
	16																								
4																									
	17																								
5																									
	18																								
6																									
	19																								
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	20																								
8																									
	21																								
9																									
	22																								
10																									
	23																								
11																									
	24																								
12																									
	25																								
13 (COM)																									

Electric actuator

Pneumatic cylinders

Assistive device

Pneumatic valves

FR/L Auxiliary Components Electronic Component

Vacuum components

Main line components

Fluid control valves

Main line components

Anti-bacterial/ bacteria-removing filter

Vacuum components

Fluid control valves

Fluid control valves

Fluid control valves

Flat cable connector (T50/T51/T52/T53) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
 * Not required with standard wiring/double wiring.

Connector pin No.				Valve No.																							
T50/T50R	T51/T51R	T52/T52R	T53/T53R	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	1	1																								
2	2	2	2																								
3	3	3	3																								
4	4	4	4																								
5	5	5	5																								
6	6	6	6																								
7	7	7	7																								
8	8	8	8																								
9 - Power supply	9	9	COM																								
10 + (COM) Power supply	10	10	COM																								
11	11		11																								
12	12		12																								
13	13		13																								
14	14		14																								
15	15		15																								
16	16		16																								
17	17		17																								
18	18		18																								
19 - Power supply	19	COM	19																								
20 + (COM) Power supply	20	COM	20																								
			21																								
			22																								
			23																								
			24																								
			25	COM																							
			26	COM																							

* Note that when the wiring method is T50/T50R, the COM polarity will be + (positive).

Serial transmission (T6*/T7*) wiring specifications sheet

* Fill in and attach to the manifold specifications sheet for anything other than the standard wiring or double wiring. (Available as made to order)
 * Not required with standard wiring/double wiring.

Serial transmission	Connector pin No.		Valve No.																
	T6*	T7*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Connector type T6G1:CC-Link 16 points	1	1																	
	2	2																	
	3	3																	
	4	4																	
	5	5																	
	6	6																	
	7	7																	
	8	8																	
	9	9																	
	10	COM	10																
	11	11																	
	12	12																	
Thin slot-insertion type T7C0:CompoBus/S 8Point T7C1:CompoBus/S 16 points T7D1:DeviceNet 16 points T7E0:S-LINK 8 points T7E1:S-LINK 16 points T7G1:CC-Link 16 points T7 L1:SAVE NET 16 points	13	13																	
	14	14																	
	15	15																	
	16	16																	
	17	17																	
	18	18																	
	19	19																	
	20	COM	20																

